Mayor's Bicycle Advisory Council

Wednesday, March 7th

CDOT
CHICAGO DEPARTMENT
OF TRANSPORTATION

Traffic Crash Fatalities in the City of Chicago
January 1, 2017 - December 31, 2017

	Pedestrians	Cyclists	Motorists
Year end 2017 (CPD)	**46**	**6**	**80**
Year end 2016 (CPD)	**44**	**6**	**63**
Avg. Year end 2011-2015 (IDOT)	**38.2**	**6.2**	**65.8**

* does not include crashes on interstates
Data: IDOT 2011-2015; CPD 2016-2017
Note: CPD statistics do not include traffic fatalities reported by State Police

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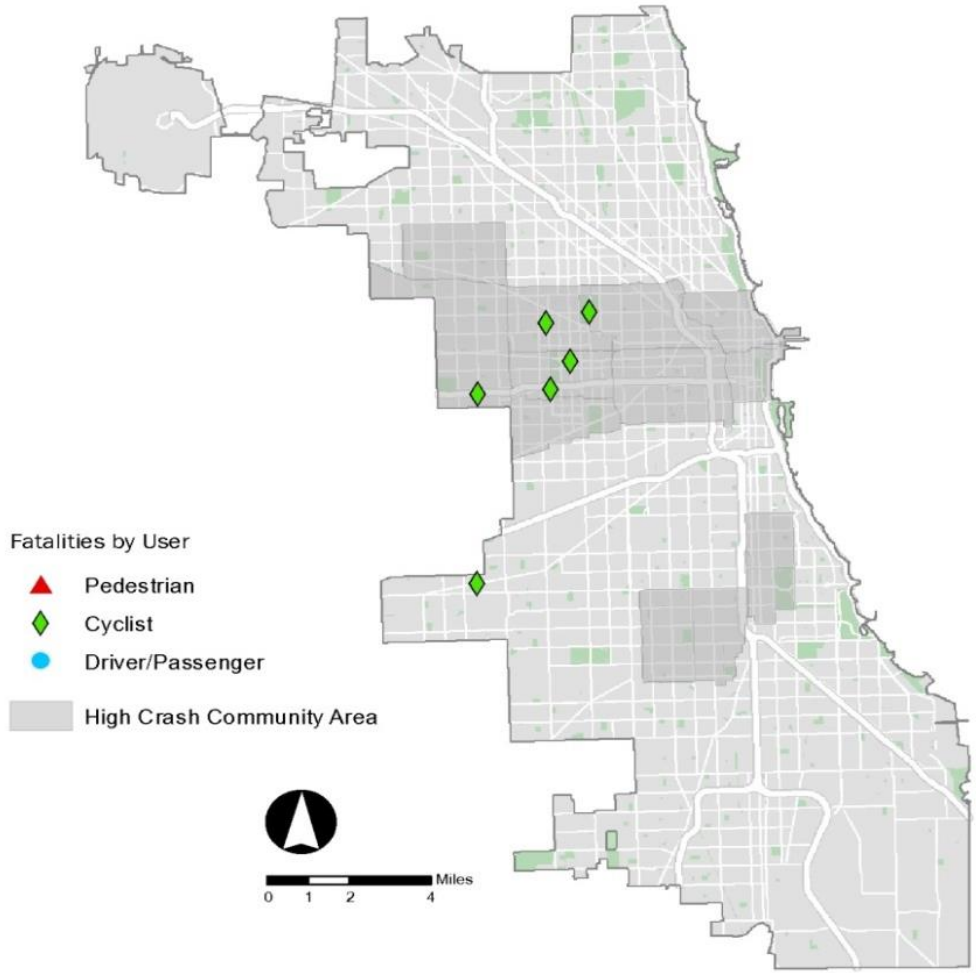

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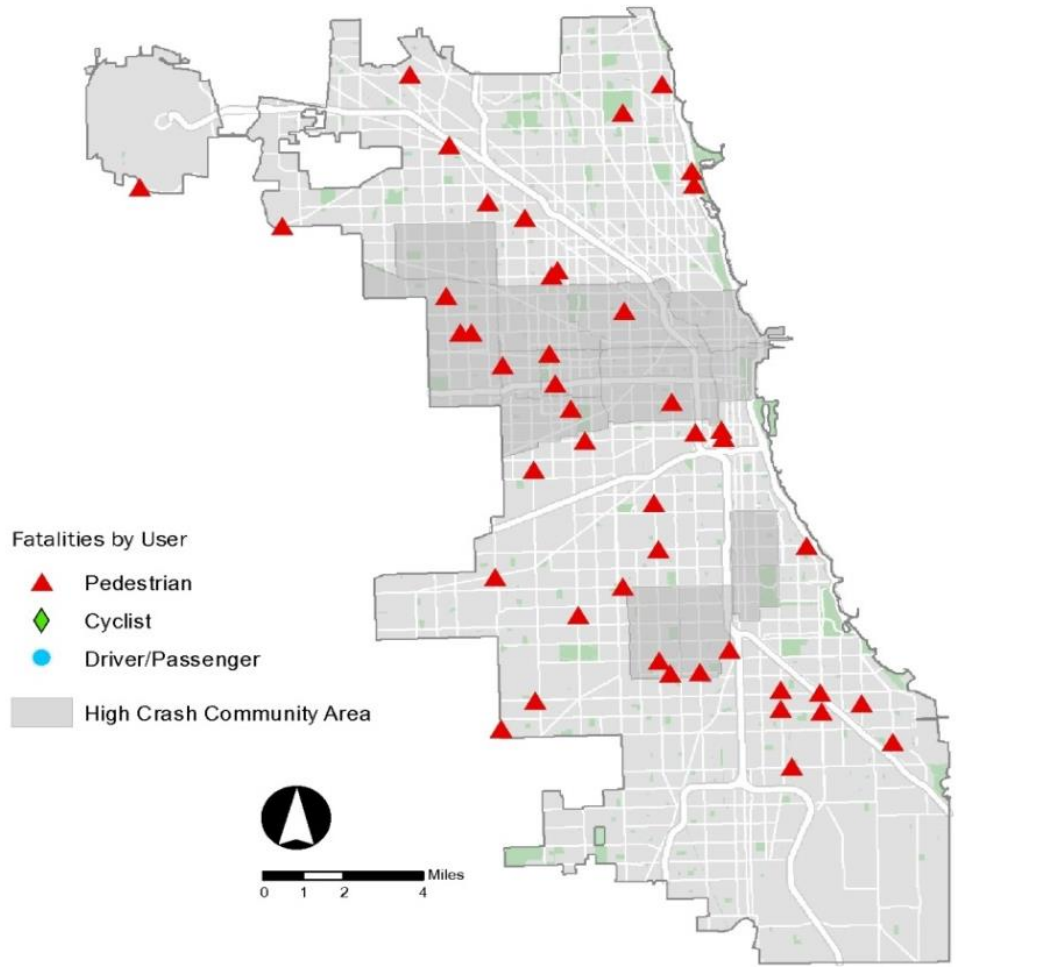

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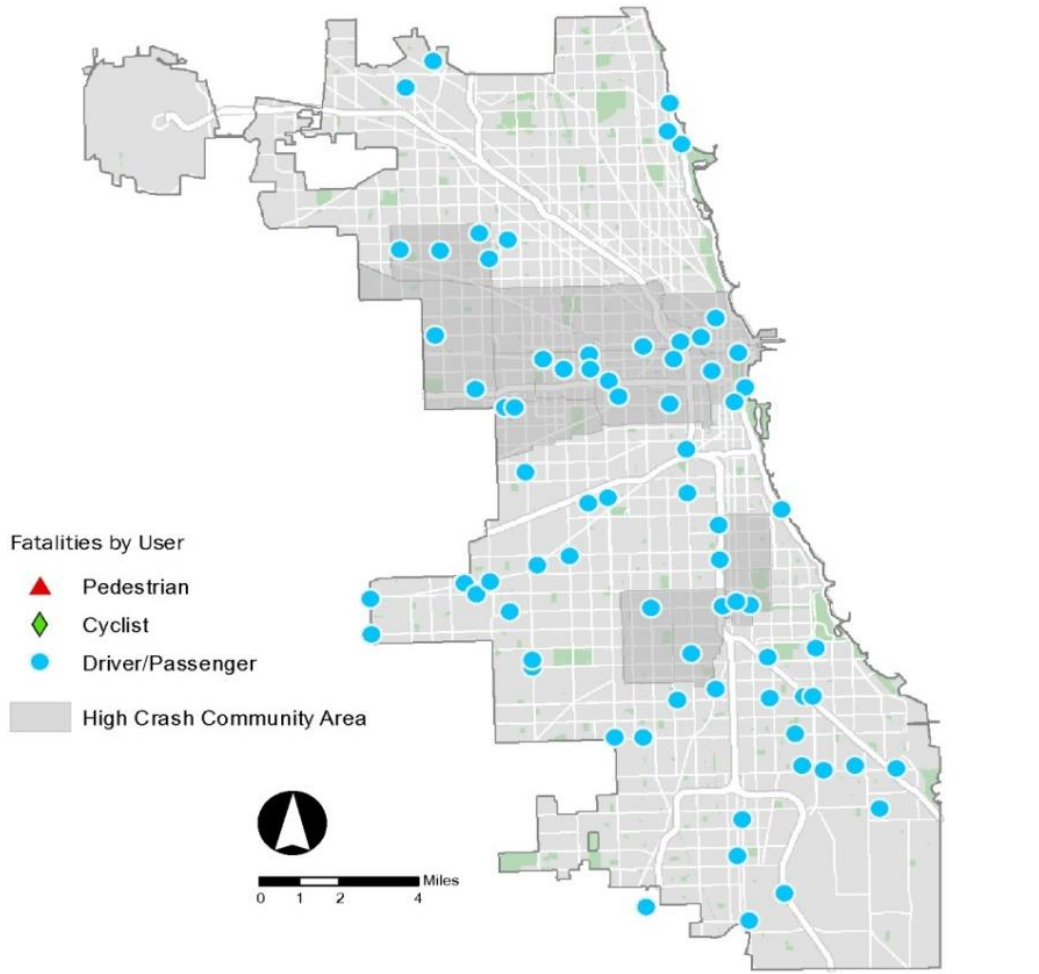

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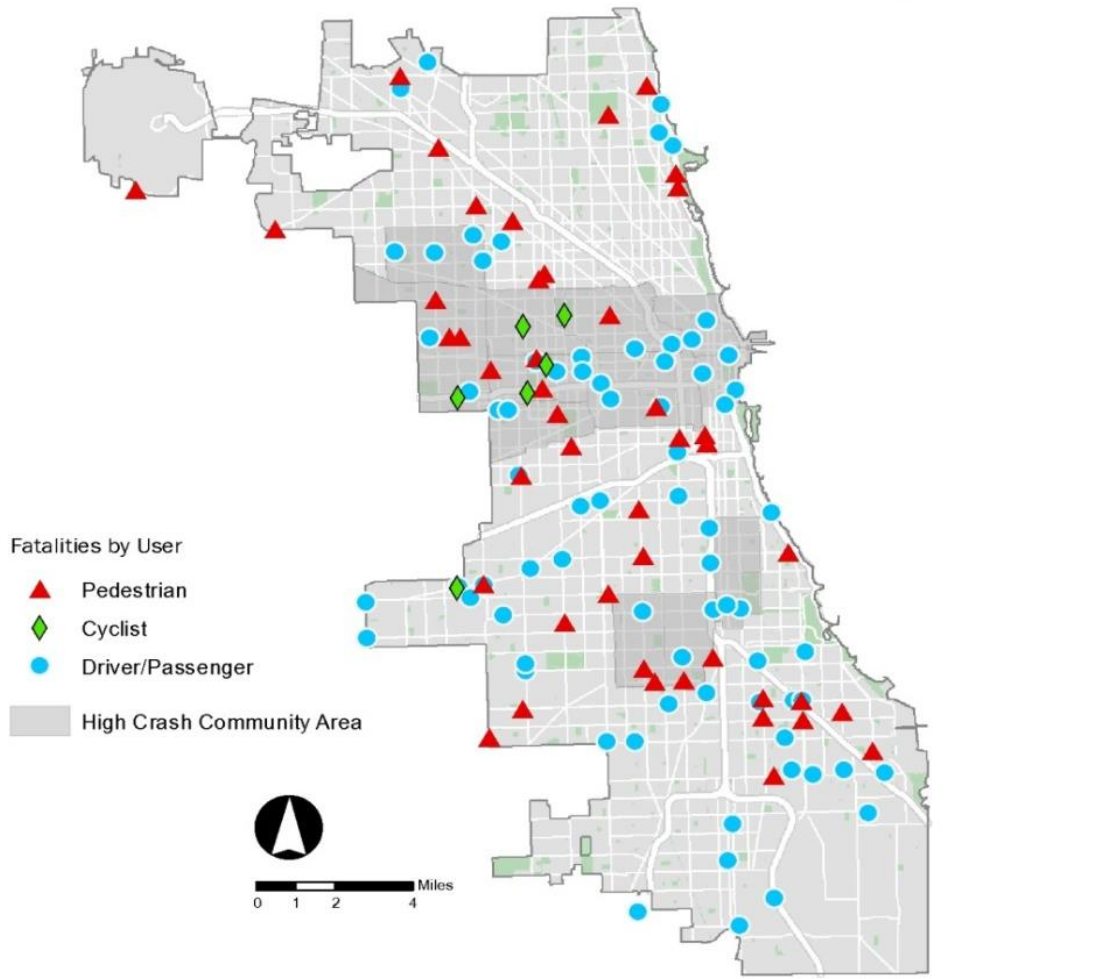


Bicyclist Fatalities, Year to Date (January 1 – February 28, 2018) - MBAC Briefing

Bicyclist Fatality Statistics

Year to date total, 2017 (CPD): 1

Year to date total, 2016 (CPD): 1

Year to date average, 2011-2015 (IDOT): 0.4

Bicyclist Fatalities by Month									
Source	IDOT	IDOT	IDOT	IDOT	IDOT	CPD	CPD	14	IDOT
	2011	2012	2013	2014	2015	2016	2017	2018	2011-2015 Average
January	1	0	0	0	1	0	1	0	0.4
February	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	1*	0
April	0	0	0	0	1	0	0		0.2
May	1	0	1	2	0	0	0		0.8
June	1	1	0	0	0	2	1		0.4
July	0	2	1	1	0	1	1		0.8
August	3	1	0	2	0	2	0		1.2
September	0	1	0	1	2	1	0		0.8
October	0	2	0	0	2	0	0		0.8
November	1	0	0	0	0	0	2		0.2
December	0	1	1	0	1	0	1		0.6
TOTAL (Jan 1 – Feb 28)	1	0	0	0	1	0	1	1*	0.4
TOTAL	7	8	3	6	7	6	6	1*	6.2

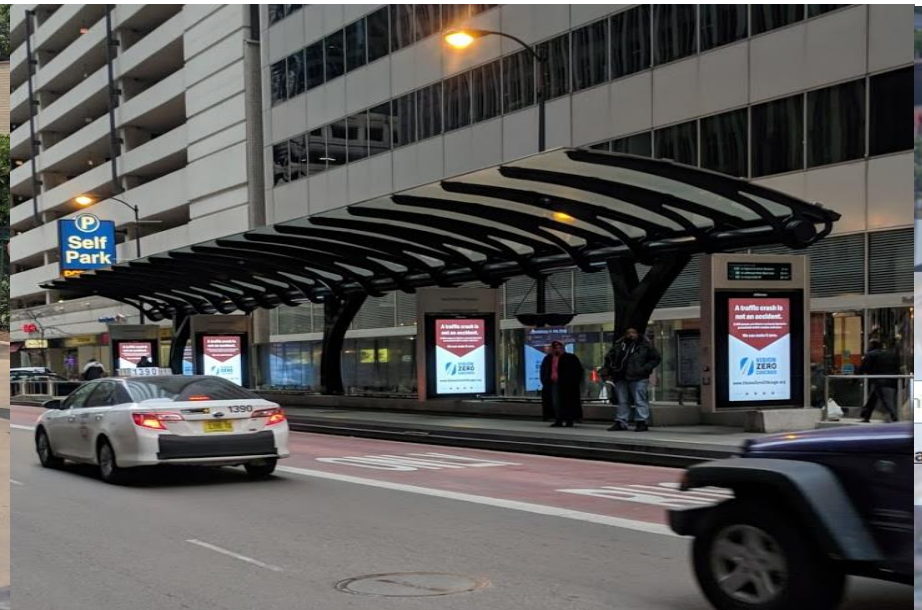
*Includes Fatality on March 1, 2018

MBAC Update – March 2018

2017 Recap & 2018 Priorities

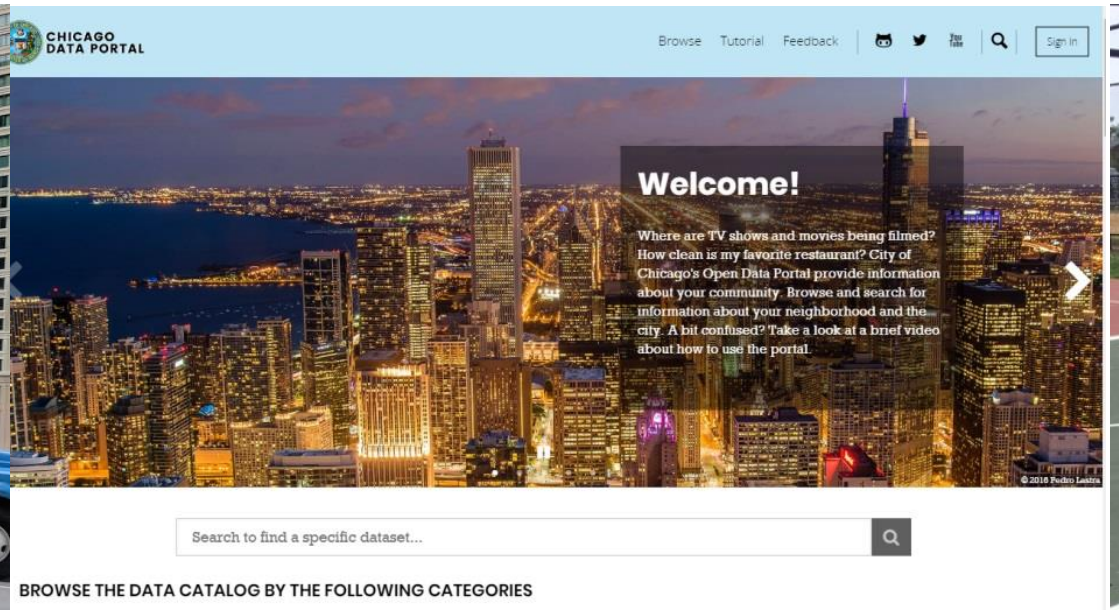
2017 Accomplishments

- Vision Zero Plan Adoption
- Policy: Truck Safety Equipment
- Outreach: Vision Zero West Side Outreach Pilot
- Marketing: Intro Campaign
- Infrastructure Funding: Grant for 4 high crash corridor improvements
- Data: Health Atlas & Electronic Crash Reporting
- Regulation: Rideshare/Taxi Training Requirements
- Infrastructure: Milwaukee Ave. Rapid Delivery



2018 Look Ahead

- Implementation of the Large Vehicles Safety Equipment Ordinance
- Public Release of crash data through data.cityofchicago.org
- Fatal Crash Response Coordination Committee
- VZ West Side: Open Streets event and infrastructure project
- High Crash Corridor Framework & other research projects underway



Questions & Discussion

Ride Illinois – Bicycle Policy 2018

Ride Illinois – Some Recent Efforts

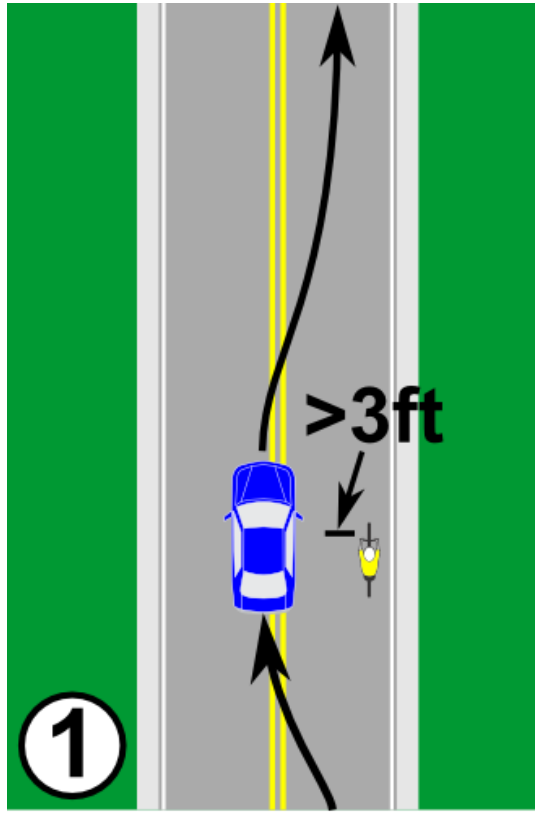
ride
ILLINOIS

- New state bike laws for 2018
- Rules of the Road edits
- School mini-grant program
- Truck driver quiz module
- Illinois Bike Summit – May 7

New state laws for 2018

Legalizing 3 common practices -

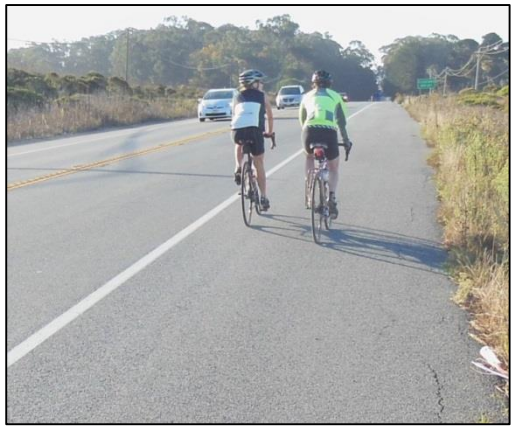
1) Pass in no-passing zones, if:
   - Biking less than half the speed limit
   - Can pass without speeding
   - Safe to do so (other passing laws)



New state laws for 2018

2) Taillight instead of reflector okay (previously, only for Chicago)

3) Biking on shoulder legal



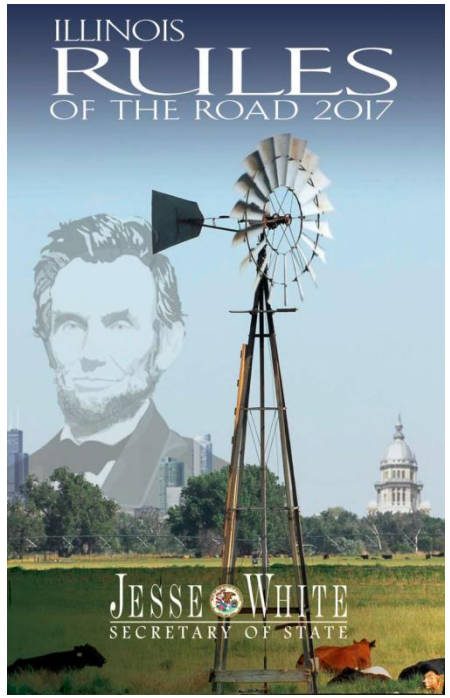
→ Legality important post-crash, etc.

Rules of the Road edits

- With CDOT and IL SOS, bike-friendly edits to driver's manual for 2018

- "Dutch Reach", 3-ft law, harassment, bike lanes, signs/markings, etc.

- Active Trans & Ride Illinois: 2018 bill on driver test questions, incl. Dutch Reach



Mini-grants for schools, driver ed

$250 for using BikeSafetyQuiz.com as online computer assignment

“Plug-and-play” functionality for elementary schools, driver ed classes

So far: 92 driver ed, 17 elem. schools

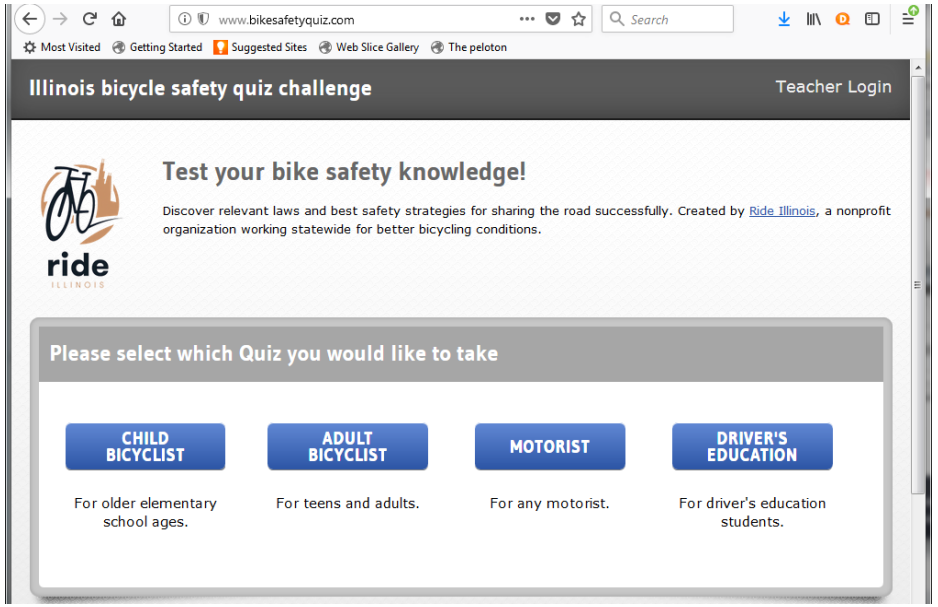
More money available

Summary of BikeSafetyQuiz.com

- Quiz-based lessons for: Adult Bicyclists, Motorists, Child Bicyclists, Driver's Education

- Car-bike laws, skills, avoidance of common crashes

- Over 70,000 users since June 2013



Soon - BSQ Commercial Driver Module

- Tailor BSQ’s Motorist quiz for truck drivers
- Will encourage relevant companies to train drivers

Illinois Bike Summit

- Monday, May 7 at UIC
- 300 expected; professionals, advocates
- Infrastructure, education, advocacy, bikeway tours, many more breakout sessions…

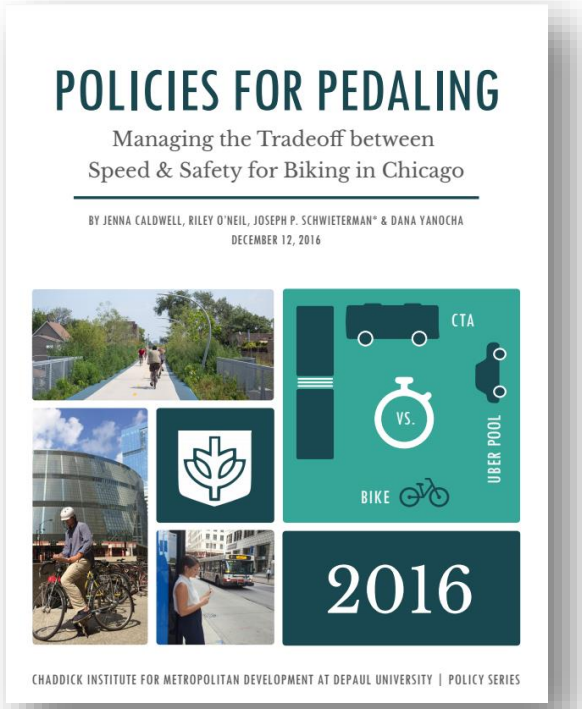
Questions?

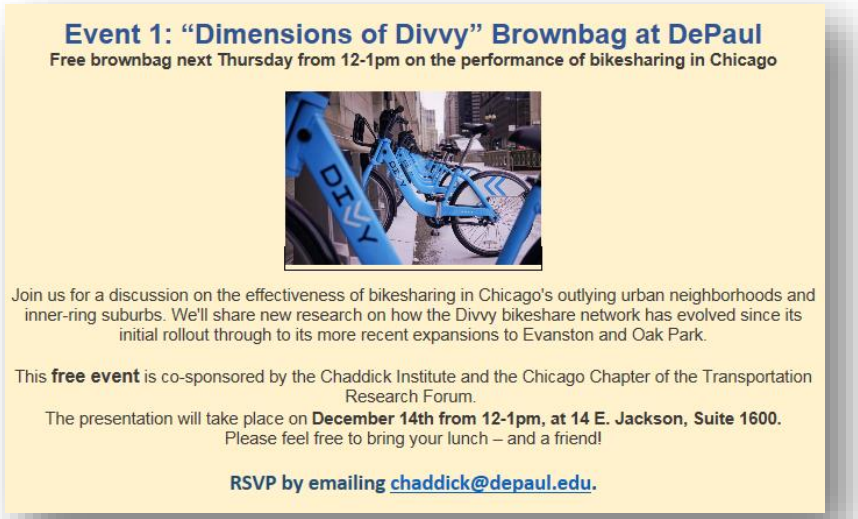
Tania Sebastian
tania@rideillinois.org

Insights on Municipal Bicycle Policy

Joseph Schwieterman, Ph.D
C. Scott Smith, Ph.D.

March 7, 2018





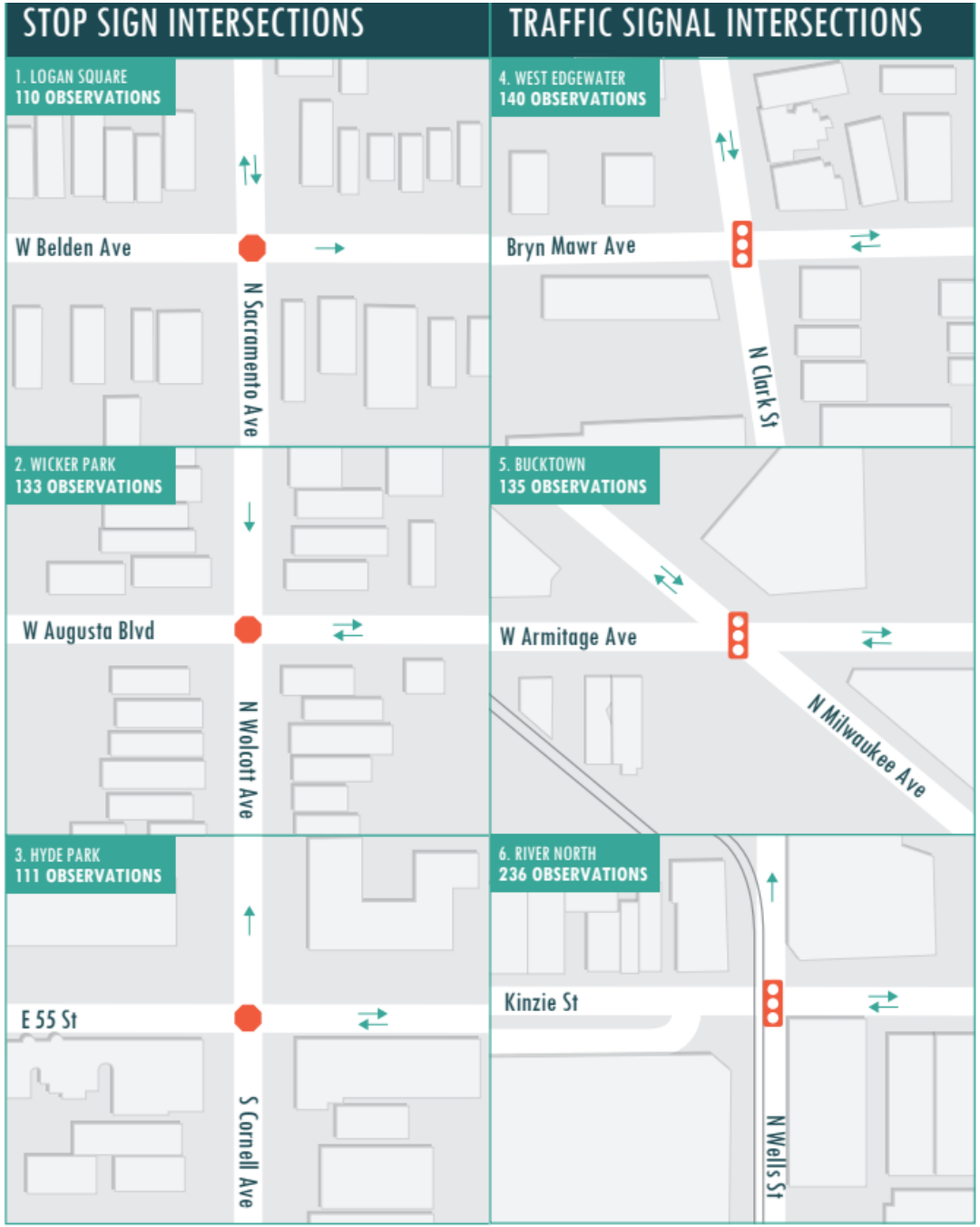
Municipal Ordinances governing Bicycling

MUNICIPALITY`	FINES FOR CYCLIST VIOLATION	SIDEWALK RIDING	MANDATORY HELMET LAW
Chicago	$50-$500 + motorist violation fines	None in BD unless < 12 y/0	None
Aurora	Pursuant to §27-8 and/or impound	None in BD unless < 14 y/0	None
Rockford	$50-$750 (GCV)	None in BD or malls	None
Joliet	Up to $750 (GVC)	None in BD	None

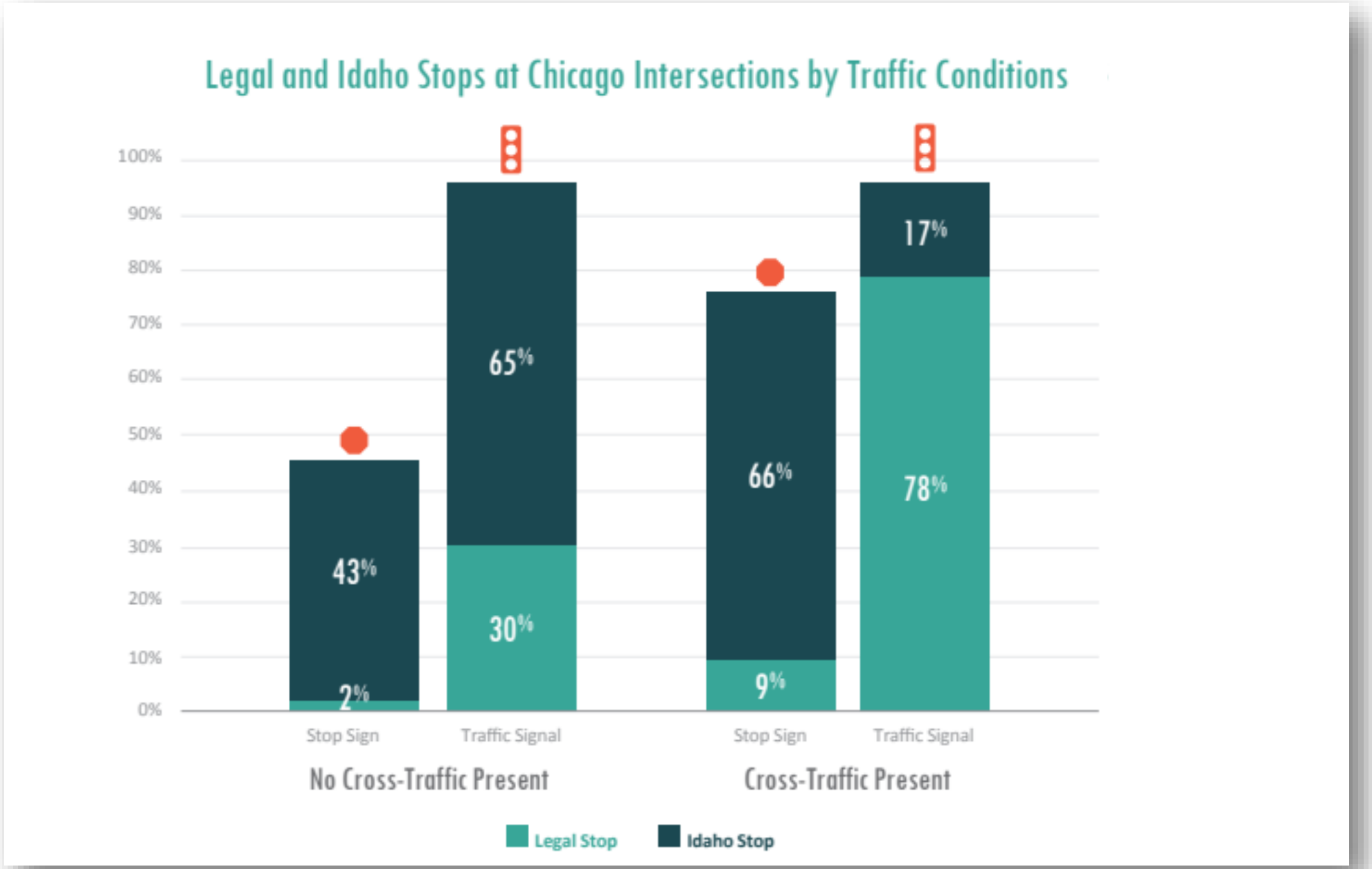
IDAHO STOP LAW | SUMMARY

At *stop signs*, the Idaho Stop Law stipulates that a cyclist: "Shall slow down and, if required for safety, stop before entering the intersection. After slowing to a reasonable speed or stopping, the person shall yield the right-of-way to any vehicle in the intersection or approaching on another highway so closely as to constitute an immediate hazard.

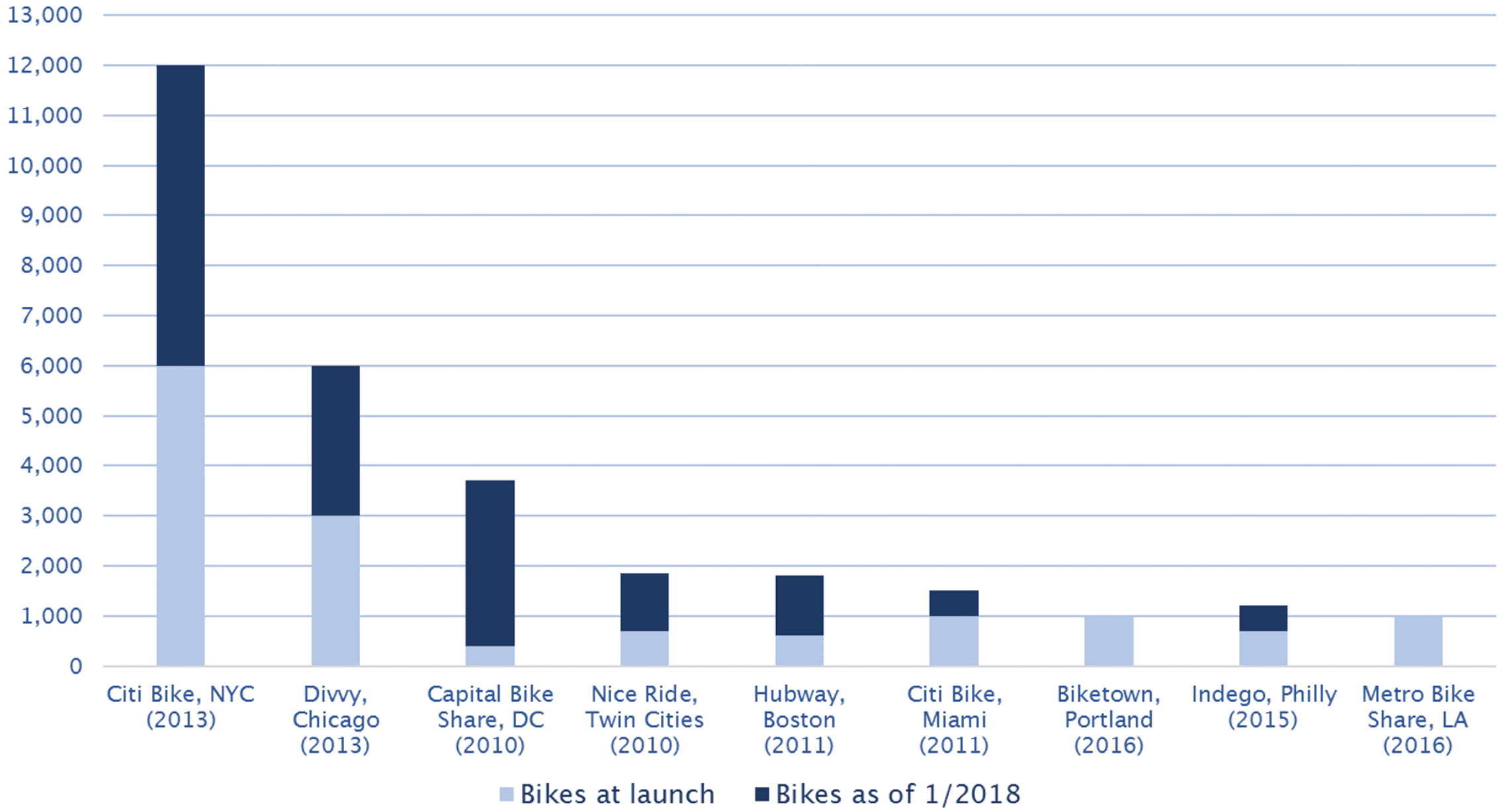
At *traffic signals,* a cyclist: "Shall stop before entering the intersection and shall yield to all other traffic. Once the person has yielded, he may proceed through the steady red light with caution."


STOP SIGN INTERSECTIONS
TRAFFIC SIGNAL INTERSECTIONS
1. LOGAN SQUARE
110 OBSERVATIONS
W Belden Ave
N Sacramento Ave
4. WEST EDGEWATER
140 OBSERVATIONS
Bryn Mawr Ave
N Clark St
2. WICKER PARK
133 OBSERVATIONS
W Augusta Blvd
N Wolcott Ave
5. BUCKTOWN
135 OBSERVATIONS
W Armitage Ave
N Milwaukee Ave
3. HYDE PARK
111 OBSERVATIONS
E 55 St
S Cornell Ave
6. RIVER NORTH
236 OBSERVATIONS
Kinzie St
N Wells St

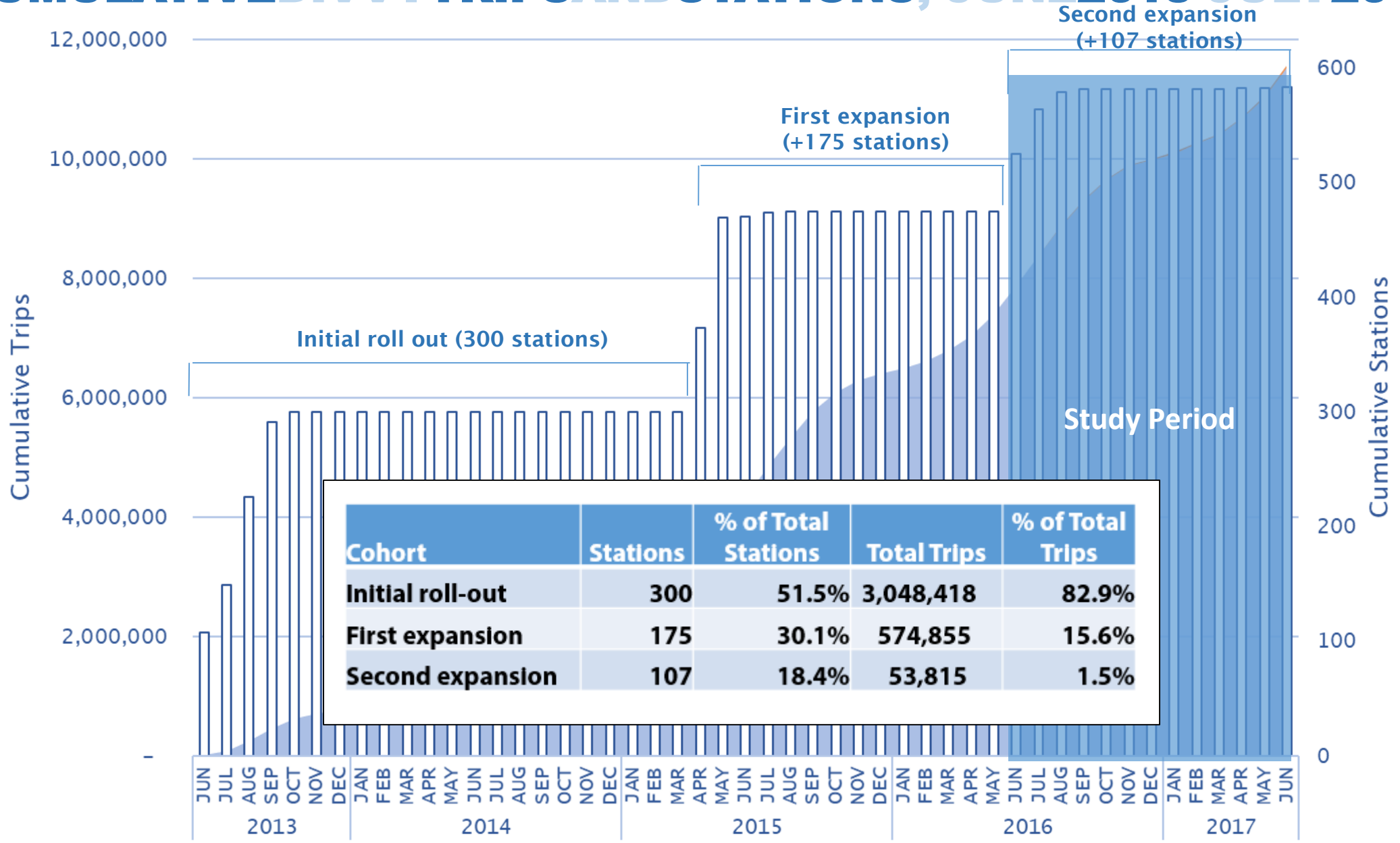

STOP


Legal and Idaho Stops at Chicago Intersections by Traffic Conditions
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
43%
2%
65%
30%
66%
9%
17%
78%
Stop Sign
Traffic Signal
Stop Sign
Traffic Signal
No Cross-Traffic Present
Cross-Traffic Present
Legal Stop
Idaho Stop

LARGEST US BIKESHARE SYSTEMS EXPANSIONS, JANUARY 2018



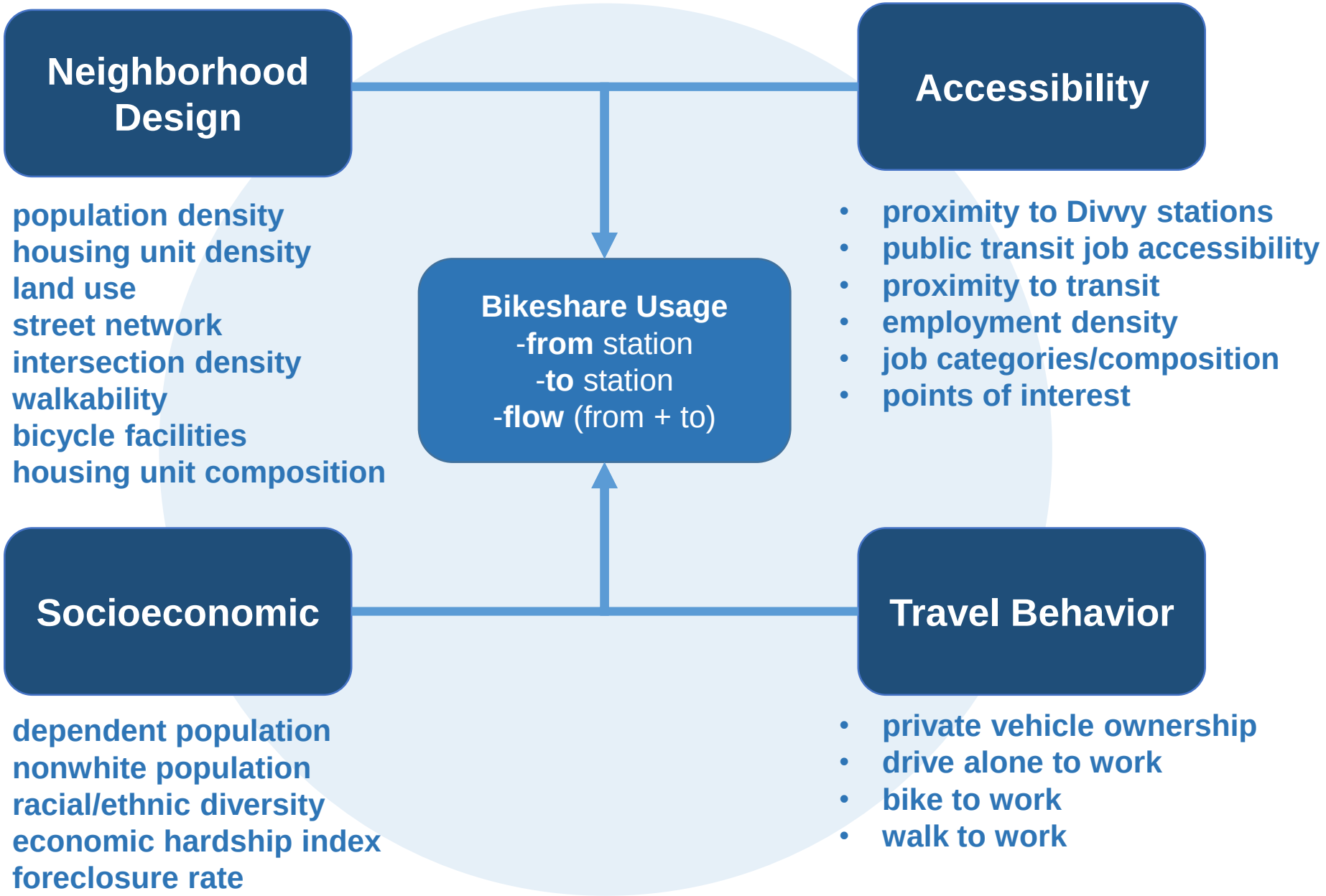
CUMULATIVE DIVVY TRIPS AND STATIONS, JUNE 2013 - JULY 2017



Cohort	Stations	% of Total Stations	Total Trips	% of Total Trips
Initial roll-out	300	51.5%	3,048,418	82.9%
First expansion	175	30.1%	574,855	15.6%
Second expansion	107	18.4%	53,815	1.5%

11,544,688 total trips
3,263,054 total hours

582 total stations (2017)
6,000 total bicycles (2017)



- **population density**
- **housing unit density**
- **land use**
- **street network**
- **intersection density**
- **walkability**
- **bicycle facilities**
- **housing unit composition**

- **proximity to Divvy stations**
- **public transit job accessibility**
- **proximity to transit**
- **employment density**
- **job categories/composition**
- **points of interest**

Variables derived from multiple sources including:

- Divvy
- City of Chicago
- ACS
- LODES
- CMAP
- OSM
- RTA

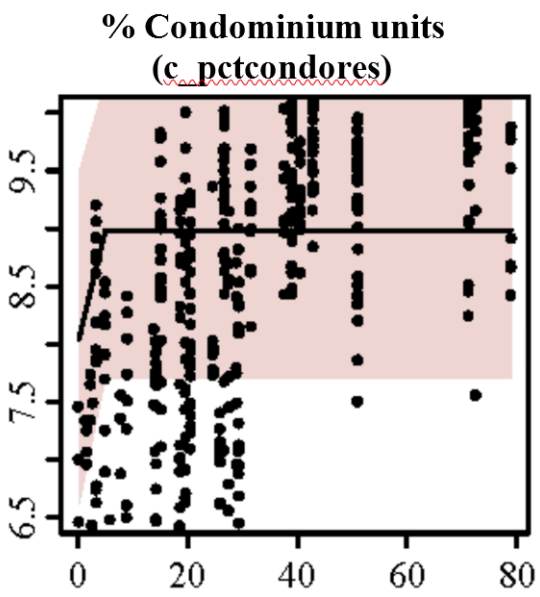
- **dependent population**
- **nonwhite population**
- **racial/ethnic diversity**
- **economic hardship index**
- **foreclosure rate**
- **house sales**
- **crime density**

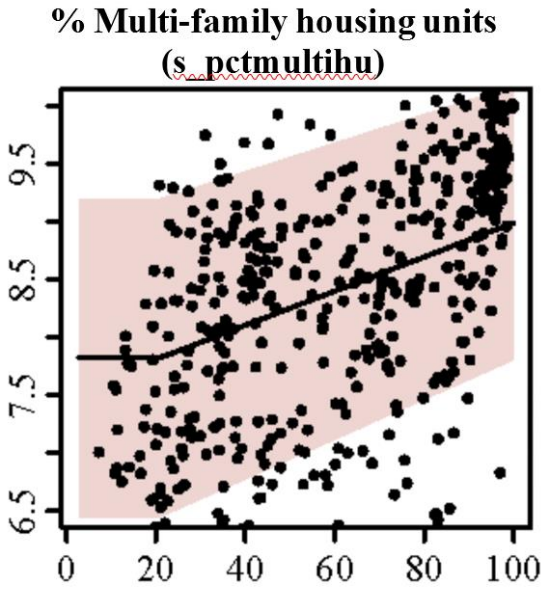
- **private vehicle ownership**
- **drive alone to work**
- **bike to work**
- **walk to work**

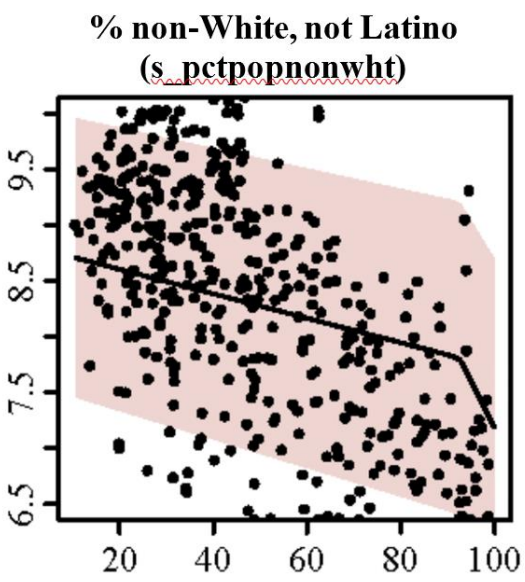
SUMMARY STATISTICS, CORRELATIONS OF MODEL VARIABLES

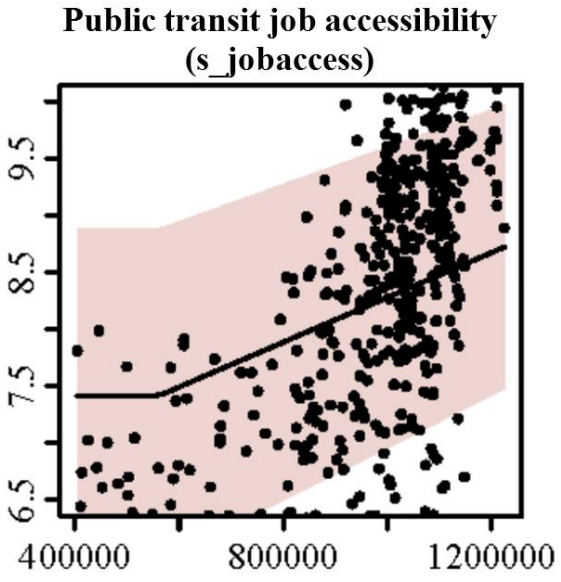
Neighborhood Design						
Bike facilities density (network miles per mi2)	s_bikelanedensity	3.19	2.50	0.40	0.39	0.39
Bike facilities density (network miles per mi2)	c_bikelanedensity	2.89	1.37	0.55	0.53	0.54
Percent of housing units, condo	c_pctcondores	31.51	23.92	0.62	0.61	0.62
Percent multi-family (5 or more) units	s_pctmultihu	55.27	29.21	0.57	0.56	0.56
Accessibility						
Divvy stations within 1-mile radius	s_div1mi	22.95	17.69	0.64	0.62	0.63
Divvy stations within 1/2 mile radius	s_divhalfmi	5.97	5.96	0.61	0.58	0.60
Points of interest density (locations per mi^2)	s_poisdens	101.31	84.69	0.57	0.55	0.56
Points of interest density (locations per mi^2)	c_poisdens	465.92	491.50	0.55	0.53	0.54
CTA L stations within 1 mile	s_L1mi	5.45	5.79	0.56	0.53	0.55
Accessibility to jobs via public transit	s_jobaccess	936,740	193,736	0.48	0.47	0.47
Average distance to Divvy stations	s_avgdist2div	6.18	1.84	-0.45	-0.44	-0.44
Average min distance to Divvy stations	c_avgmin2div	0.31	0.12	-0.57	-0.56	-0.57
Socioeconomic						
Residential foreclosures per 100 parcels	c_allresper100	0.66	0.62	-0.42	-0.42	-0.42
Economic hardship index (0 [low] - 1 [high])	s_ehindex	1.69	1.38	-0.48	-0.47	-0.47
Percent dependent population (<18 or >=65)	c_pctdeppop	13.37	3.74	-0.57	-0.55	-0.56
Percent of population non-White, not Latino	s_pctpopnonwht	56.16	28.26	-0.51	-0.50	-0.50
Percent unemployed	s_pctunemp	6.85	4.35	-0.40	-0.40	-0.40
Percent of workers earning >= $3,333/mo	s_rac_pcthigh	51.51	19.61	0.56	0.54	0.55

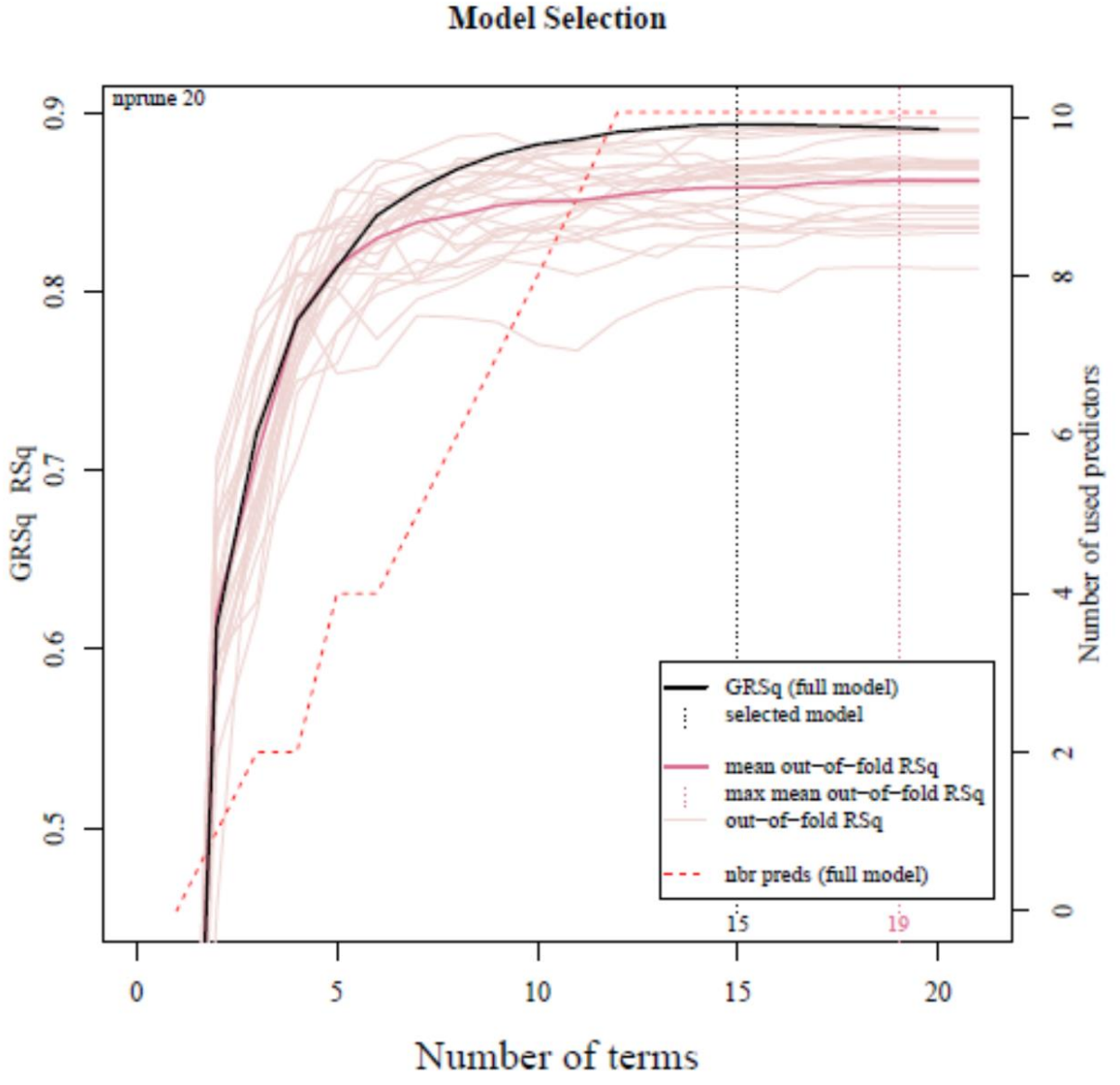
NONLINEARRELATIONSHIPSMARSMODELRESULTS











LINEAR REGRESSION RESULTS FOR THREE DIVVY USAGE MODELS

Variable	Standardized	Coefficient	Std. Error	t value	Pr(>|t|)
ln(trips_from)					
(Intercept)	**0.00**	**5.55**	**0.72**	**7.68**	**0.00**
s_pctmultihu	**0.26**	**0.02**	**1.79E-03**	**9.92**	**0.00**
s_jobaccess	**0.18**	**1.84E-06**	**3.11E-07**	**5.92**	**0.00**
s_divtrips_nd	**0.08**	**0.03**	**0.01**	**4.27**	**0.00**
s_bikelanedensity	**0.03**	**0.03**	**0.01**	**1.96**	**0.05**
s_avgdist2div	**-0.09**	**-0.10**	**0.03**	**-2.94**	**0.00**
s_pctcomdral	**-0.09**	**-0.01**	**3.45E-03**	**-4.23**	**0.00**
s_pctunemp	**-0.15**	**-0.07**	**0.01**	**-6.32**	**0.00**
s_pctpopnonwht	**-0.18**	**-0.01**	**1.92E-03**	**-6.57**	**0.00**
c_allresper100	**-0.22**	**-0.70**	**0.09**	**-7.62**	**0.00**
s_mal2femtrips					0.54
c_pctcondores					0.92

Above model: R-squared: 0.87; Adj r-squared: 0.86; F-statistic: 337.907 on 11 and 570 DF, p-value: 0.000

(Full model: R-squared: 0.93; Adjusted R-squared: 0.92; F-statistic: 66.978 on 100 and 482 DF, p-value: 0.000)

STRONGEST PREDICTORS

1. ***Housing density** meaningfully explains variations in ridership across the Divvy service area;*

2. ***Transit linkages** and, specifically, job accessibility via transit, are some of the strongest predictors of ridership;*

3. ***Unemployment, high economic hardship, foreclosures and proportion of the population that is nonwhite** are negatively associated with ridership;*

4. ***Areas with higher bikeshare station densities** are associated with greater levels of ridership;*

5. ***Percentage of commuters who drive alone to work** is are negatively associated with ridership;*

6. ***Bike lanes** and other cycling treatments and infrastructure around bikeshare stations is associated with greater performance;*

- ***Areas with higher proportions of dependent populations** (kids and older adults) are negatively correlated with ridership;*

What happens when we turn on the **Power** and **Equity** moves like electricity through our homes, streets, neighborhoods and cities?

EQUITICITY

POWER + EQUITY >

Equiticity and Bicyclist Ticketing

Olatunji Oboi Reed
President & CEO, Equiticity
oboi@equiticity.org

Please join us for the next
Mayor's Bicycle Advisory Council Meeting

Wednesday, June 6, 2018

CDOT
CHICAGO DEPARTMENT
OF TRANSPORTATION